

L 10873-66 EWI(m)/EWI(j)/T/ETC(m) RPI M/RM

ACC NR: AP5025864

SOURCE CODE: UR/0020/65/164/004/0822/0825 57

AUTHOR: Nefedov, O. M.; Garzo, G.; Sekey, T.; Shirayev, V. I.

ORG: Institute of Organic Chemistry im. N. D. Zelinskiy (Institut organicheskoy khimii); Inorganic Chemistry Research Group, Academy of Sciences, VNR, Budapest (Issledovatel'skaya gruppa po neorganicheskoy khimii Akademii nauk VNR)

TITLE: Structure and thermal degradation of cyclic and linear polymers of dimethylsilylene and dimethylgermylene

SOURCE: AN SSSR. Doklady, v. 164, no. 4, 1965, 822-825

TOPIC TAGS: organosilicon compound, organogermanium compound, pyrolysis

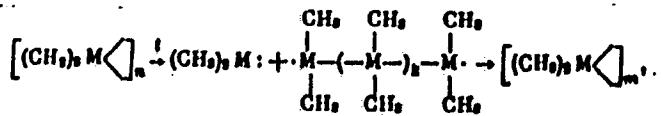
ABSTRACT: An IR, NMR, and mass-spectrometric study of the soluble part of the products resulting from the reaction of $(\text{CH}_3)_2\text{SiCl}_2$ with lithium in tetrahydrofuran showed that it consists mainly (95-97%) of crystals melting at 228-231°C and forming the cyclic polymer $[(\text{CH}_3)_2\text{Si}]_6$. Similarly, a mass-spectrometric analysis confirmed that the germanium polymer, melting at 207-209°C, also forms the cyclohexamer $[(\text{CH}_3)_2\text{Ge}]_6$. Pyrolysis of dimethylsilylene and dimethylgermylene at moderate temperatures (up to 350-400°C) leads mainly to the rupture of M-H bonds to the formation of monomeric, dimeric, and polymeric biradicals:

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where M = Si or Ge; k = 0-4 or more; m = 3(?), 4-6 and more. In the absence of special acceptors, these biradicals recombine chiefly with one another, forming the cyclic polymers $\left[(\text{CH}_3)_2 \text{M} \right]_m$. The data obtained indicate that pyrolysis of the polymers $\left[(\text{CH}_3)_2 \text{M} \right]_n$, where M = Si, Ge, Sn, or Pb, can be used as a general method of generating the corresponding carbenoids $(\text{CH}_3)_2 \text{M} :$. The paper was presented by B. A. Kazanskiy, Member of AN SSSR, 26 Mar 65. Authors thank M. I. Gorfinkel', A. S. Khachaturov, and L. A. Leytes for carrying out the spectroscopic determinations.
 Orig. art. has: 2 tables.

SUB CODE: 07 / SUBM DATE: 11Mar65 / ORIG REF: 004 / OTH REF: 007

AC
Card 2/2

L 42293-66 EIT(d)/EIT(m)/EWP(v)/EWP(t)/ETI/EWP(k)/EMF(h)/EWP(l) IJP(c) JD/NW/JG
ACC NR: AP6019828 (N) SOURCE CODE: UR/0370/66/000/001/0073/0079

AUTHOR: Korobochkin, Yu. M. (Moscow); Pautov, V. D. (Moscow); 43
Shiryayev, V. I. (Moscow) 41
B

ORG: none

TITLE: Some characteristics of electron beam zone refining of metals

SOURCE: AN SSSR. Izvestiya. Metally, no. 1, 1966, 73-79

TOPIC TAGS: electron beam, metal zone refining

ABSTRACT: The basic units of the electric part of the apparatus were: a Type FRS ferroresonance stabilizer, a high voltage transformer, a Type RNO-250-2 regulating autotransformer, and two Typr TRI-6/15 thyratrons fed by heating transformers. A high voltage was applied to the sample which formed the anode. The emission current could be uniformly regulated from 0 to 300 ma. As a result of the evolution of gases and the vaporization of impurities, the emission current varies within wide limits and makes the melting process difficult, sometimes even leading to an electrical discharge and to fracture of the sample. The article gives a diagram of the electric circuit. The mechanical part of the apparatus (illustrated) made possible movement of the

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UDC: 669.054

L 42293-66

ACC NR: AP6019828

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annular irradiation unit at the required rate, as well as rotation of the sample. A Type D-10 $\frac{1}{4}$ motor (33 rpm) was used to displace the cathode. A reducer permitted varying the rate from 0.04 to 1.2 rpm, which corresponded to a change in the rate of movement of the cathode from 10 to 300 mm/hour. The annular electron irradiation unit was made of tungsten filament and surrounded the sample. The optimum diameter of the annulus was 25-30 mm. With the above described apparatus, zone melting experiments were carried out on a number of metals: iron, nickel, copper, molybdenum, tungsten, vanadium, niobium, and titanium, as well as on iron-nickel, iron-nickel-chromium, and other alloys. It was impossible to use this apparatus for melting metals such as chromium, manganese, and others, which have a high vapor pressure, because of discharges between the anode and the cathode. The results of the experiments are shown in curves and microphotographs. Orig. art. has: 8 figures.

SUB CODE: 13,11 / SUBM DATE: 04Jan65 / ORIG REF: 004 / OTH REF: 005

Card 2/2

L 31887-66 EWT(m)/EWP(j)/T IJP(c) RM

ACC NR: AP6012537

SOURCE CODE: UR/0062/66/000/003/0584/0584

AUTHOR: Kolesnikov, S. P.; Shiryayev, V. I.; Nefedov, O. M.

40

39

B

ORG: Institute of Organic Chemistry im. N. D. Zelinskogo, Academy of Sciences SSSR
(Institut organicheskoy khimii Akademii nauk SSSR)

TITLE: Germanium dichloride complex compound

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 3, 1966, 584

TOPIC TAGS: germanium compound, complex compound, chemical decomposition

ABSTRACT: During the study of the reaction of HGeCl₃ with diethers it was discovered (that contrary to the report of a previous communication [Angew. Chem., 76, 498, (1964)] 1,4-dioxane does not produce trichlorogerманe ether with HGeCl₄, but that they react upon the liberation of HCl. According to data obtained from elemental analysis, IR, NMR and molecular weight, they produce a crystalline complex compound of germanium dichloride C₄H₈O₂·GeCl₂. Formation of C₄H₈O₂·GeCl₂ from HGeCl₃ and dioxane is a direct proof of the ability of HGeCl₃ to dissociate easily upon the formation of GeCl₂. The complex is stable in air and upon aqueous hydrolysis

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ACC NR: AP6012537

produces Ge(OH)_2 , is insoluble in hydrocarbons, and reacts with ethanol and acetone. Upon heating, it decomposes at 140-210°C. With unsaturated compounds, the complex produces germanium organic monomers and polymers.

SUB CODE: 07/ SUBM DATE: 27Dec65/ ORIG REF: 004/ OTH REF: 002

Card 2/2

TEBYAKINA, A.Ye.; SHIHYAYEVA, V.L.; KIVMAN, G.Ya.

Comparative study of methods of determining the activity of penicillin.
Trudy VNIIL no.1:97-104 '53. (MIRA 8:1)

1. Iz TSentral'nogo gosudarstvennogo nauchnogo kontrol'nogo instituta
im. Tarasevicha (direktor S.I.Didenko).
(Penicillin)

SHIRYAYEVA, V. L.

"The Effect of Penicillin on the Property of Staphylococcus Which Determines Its Pathogenicity." Cand Biol Sci, Acad Med Sci USSR, Moscow, 1954. (KL, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530011-2

SHIPIEV, V. I.

1413. Vliyaniye Pentsilina Na Svoistva Stafilocokka, opredelya, Yushchie Yego Patogennost'. M. 1954. 11 s. 19 sm. (Akad. Med. Nauk SSSR.). 100 ekz. B. Ts.- (54-54861)

SO: Knizhnyaya Letopis', Vol. 1, 1955

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530011-2"

USSR/Medicine - Antibiotics

FD-557

Card 1/1 Pub. 148 - 20/23

Author : Shirayeva, V.L.

Title : The effect of penicillin and gramicidin on certain characteristics of staphylococci

Periodical : Zhur. mikrobiol. epid. i immun. t, 64, Jun 54

Abstract : A brief discussion is given of the morphological and tinctorial changes in the characteristics of strain 209 and 1623 staphylococci due to the action of penicillin and gramicidin. The effect of these antibiotics on the hyaluronidase activity strains 209, 75a, 114a, O³, and 1623 is also mentioned. No references are cited.

Institution : State Control Institute of Serums and Vaccines imeni Tarasevich
(Director-S.I. Didenko)

Submitted : January 27, 1954

SHIRYAYEVA, A. L.

SHIRYAYEVA, A.L.

Effect of penicillin on the spreading factor of staphylococcus
filtrates in vitro. Zhur. mikrobiol. epid. i immun. no.6:68 -1954
(MLRA 7:7)

1. Iz Gosudarstvennogo kontrol'nogo instituta syvorotok i
vaktsin im. Tarasevicha.
(STAPHYLOCOCCUS) (PENICILLIN)

ESSR/Microbiology, Antibiosis and Symbiosis.
Antibiotics

F-3

Abs Jour: Ref hur - Biol., № 6, 1958, 24138

Author : Yakobson, L.M., Shiryaeva, V.L., Svirskaya, S.I.,
Svintsova, E.M.

Inst : Not given

Title : Medication o Dysentery Stimulant Under the
Influence of Antibiotics.

Orig Pub: V sb.: Antibiotiki. Eksperim.-klinich. izuch. M.,
1956, 148-159

Abstract: It was established that the least sensitivity to
antibiotics exists in *Bacterium dysenteriae Flexneri*,
the greatest in *Bact. Newcastle*, and intermediate
in *Bact. Sonne*. The most effective of the antibio-
tics studies-- streptomycin, biomycin, terramycin
and levomycin-- was biomycin (bacteriostatic dose--
1.6 μ /ml); the least effective is streptomycin.

Card 1/3

433R/ Microbiology, Antibiosis and Symbiosis.
Antibiotics

F-2

Abs Jour: Ref Zhur - Biol., No 6, 1958, 24138

Abstract: testifies to the necessity of using combined
chemotherapy.

Card 3/3

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530011-2

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530011-2"

SHIRYAYEVA, V.L.

Stability of streptomycin in solutions containing sulfates and
calcium chloride complexes [with summary in English]. Antibiotiki
2 no.3:56-57 My-Je '57. (MIRA 10:8)

1. Gosudarstvennyy kontrol'nyy institut syvorotok i vaktsii imeni
L.A.Tarasevicha
(STREPTOMYCIN,
stability in solutions containing sulfates & colcium
chloride (Rus))

SHIRYAYEVA, V.L.; BACHURINA, V.G.

Stability of streptomycin sulfate during prolonged storage under different conditions. Antibiotiki 6 no.1:76-78 Ja '61.

(MIRA 14:5)

1. Otdel antibiotikov (zav. - prof. L.M.Yakobson) Gosudarstvennogo kontrol'nogo instituta meditsinskikh biologicheskikh preparatov imeni L.A.Tarasevicha.

(STREPTOMYCIN)

SHIRYAYEVA, V.L.

Stabilization of suspensions of spores and vegetative forms of microbes
and their use in research on the activity of antibiotics. Antibiotiki
7 no.1:76-80 Ja '62. (MIRA 15:2)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh
preparativ imeni L.A.Tarasevicha.
(ANTIBIOTICS) (BACTERIA, SPOREFORMING)

FIKHMAN, B.A.; SHIRYAYEVA, V.L.

Siliconization of metallic cylinders used for determining
the activity of antibiotics. Med. prom. 15 no.6:50-52 Je
'61. (MIRA 15:3)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh
biologicheskikh preparatov, imeni Tarasevicha.
(ANTIBIOTICS)

FIKHMAN, B.A.; SHIRYAYEVA, V.L.

Numerical equivalent of turbidity for suspensions of cells of yeast
test cultures used for determining the activity of antibiotics.
Antibiotiki 7 no.8:742-744 Ag '62. (MIRA 15:9)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh
preparatov imeni L.A.Tarasevicha.
(ANTIBIOTICS) (YEAST)

CHIRYATNIKOV, V.I., starshiy nauchnyy sotrudnik; LEVINA, L.I., starshiy nauchnyy sotrudnik; BUSHKOVA, L.A., mladshiy nauchnyy sotrudnik; STEFANOV, A.V., starshiy veterinarnyy vrach-bakteriolog; SHIRYAYEVA, V.M., starshiy veterinarnyy vrach-bakteriolog; SOLOV'YEVA, O.T., veterinarnyy vrach-bakteriolog; BOLDOVA, A.K., inzh.

Aging of cured meat in large containers. Trudy VNIIMP
no.12:58-70 '62. (MIRA 18:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlennosti (for Chiryatnikov, Levina, Bushkova).
2. Moskovskiy myasokombinat (for Stefanov, Shirayeva, Solov'yeva, Boldova).

GRINZAYD, M.I.; SHIRYAYEVA, V.N.

Bacteriological evaluation of the efficacy of synthomycetin therapy of dysentery in children; authors' abstract. Zhur. mikrobiol. epid. i immun. no.6:29-30 Je '54. (MLRA 7:7)

1. Iz Kuybyasheskogo instituta epidemiologii, mikrobiologii i gigiyeny (dir. K.P.Vasil'yeva, nauchnyy rukovoditel' dotsent L.A.Belikov)

(DYSENTERY, BACILLARY, in infant and child,
*ther., chloramphenicol)

(CHLORAMPHENICOL, therapeutic use,
*dysentery, bacillary, in child.)

SHIRYAYEVA, V.N.; PONOMAREVA, V.M.; RUSAKOVICH, L.D.

Bacteriological evaluation of the effectiveness of synthomycin therapy for dysentery in children. Zhur.mikrobiol.epid.i immun. no.3:67-70 Mr '55. (MLRAB:?)

1. Iz Kuybyshevskogo instituta epidemiologii, mikrobiologii i gигиены (dir. K.P.Vasil'yev) i iz 7-go lechebnogo ob'yedineniya (glavnnyy vrach A.I.Ryabova)

(CHLORAMPHENICOL, therapeutic use,
dysentery in child.)

(DYSENTERY, BACILLARY, in infant and child,
ther., chloramphenicol)

SHIRYAYEVA, V. N.

"Bacteriological evalution of the effectiveness of
syntomycin treatment of children ill with dysentery."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists
and Infectionists, 1959.

LEVIN, Iosif Yakovlevich; ARKIV, A.G., kand. tekhn.nauk, retsenzent;
YERMAKOV, S.S., kand. tekhn. nauk, retsenzent; SHIRYAYEVA,
V.Ya., kand. tekhn. nauk, red.; RODZEVICH, S.S., red.;
ORESHKINA, V.I., tekhn. red.

[Handbook for the designer of precision instruments] Spravochnik konstruktora tochnykh priborov. 2. izd. Moskva, Oborongiz,
1962. 727 n. (MIRA 16:4)
(Mechanical engineering--Instrument manufacture)

БЕРДИНА, А. . . СИЛЯНЧУК, В.П., ТОПОНИЕВА, В.Ye.

Ultravioletographic method of studying the kinetics of chemical reactions
in the steady-state phase. Kin. i. katal. 6 no.4:758-760 Jl-Ag '65.

1. Institut neftekhimicheskogo sinteza imeni A.V. Toponiyeva AN SSSR.
(KIRA 18:9)

SHIRYAYEVA, V.N.; KASHIROVA, A.K.

Seawater vibrios in the harbor of Odessa. Zhur. mikrobiol.,
epid. i immun. 41 no.10:145 '64. (MIRA 18:5)

1. Odesskaya portovaya protivochumnaya latoratoriya.

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530011-2

ALEKSANDROV, S.N.; SHIRYAYEVA, Ye.I.

Determination of aromatic hydrocarbons using the method of specific
and relative dispersions. Trudy Inst."Khimgas" no.6:115-123 '51.
(Aromatic compounds) (Dispersion) (MLRA 7:8)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530011-2"

SILINA, N.P.; POKORSKIY, V.N.; SHIRYAYEVA, Ye.I.; USTRAYKH, M.A.

Vapor - liquid equilibrium in the systems toluene - diethylene glycol and o-xylene - diethylene glycol. Trudy VNIIneftekhim no.5:124-132 '62.

(Toluene) (Xylene)
(Diethylene glycol)

KISLYAKOVA, Ye.N.; SHIRYAYEVA, Ye.M.

Magnetic saturation as a method of study of steel tempering. Zav.
lav. 21 no. 8:960-962 '55. (MLRA 8:11)
(Tempering)

ACC NR: AR6028

SOURCE CODE: UR/0269/66/000/005/0070/0070

AUTHOR: Shiryayeva, Ye. P.

30

B

TITLE: Determination of atmospheric density on the basis of meteors photographed at the Odessa Astronomical Observatory for the period of International Geophysical Cooperation

SOURCE: Ref. zh. Astronomiya, Abs. 5.51.560

REF SOURCE: Byul. Komis. po kometam i meteoram Astron. soveta AN SSSR, no. 12, 1965, 38-43

TOPIC TAGS: atmospheric density, meteor observation

ABSTRACT: Results are presented of density calculations of the upper layers of the earth's atmosphere made on the basis of photographic observations of meteors in Odessa. The results are compared with data from rocket measurements. [Translation of abstract]

[NT]

SUB CODE: 03/

Card 1/1 hs

UDC: 523.58

ASHBEL', S.I.; VOLOVIK, E.M.; SHIRYAYEVA, Ye.S. (Gor'kiy)

Invalidism as a consequence of certain occupational diseases.
Gig. truda i prof. zab. 4 no.4:55-56 Ap '60. (MIRA 15:4)

1. Institut gigiyeny truda i professional'nykh zabolеваний.
(OCCUPATIONAL DISEASES) (DISABLED)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530011-2

SAKAROV, G.S., kand. tekhn. nauk; BULASHEV, A.I., doktor tekhn. nauk, prof.;
PAISON, A.I., kand. tekhn. nauk; SHIRYAYEV, Yu.V., fiz.

Forging and hot die stamping of SAP [sintered aluminum powder].
(Study MATI no.61:5-19 '65.) (MIRA 18:10)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530011-2"

SHIRYAYEVA, Ye. V.

"Some Properties of Monotonic Operators in Abstract Spaces." Cand Phys-Math Sci, Kazan' State U, Kazan', 1954. (RZhMat, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, Jun 55

SUSLINA, O.I.; SHIRYAYEVA, Yu.D.

Joining the warm interfacing, the lining, and the garment.
Shvein.prom. no.3:12-15 My-Je '59. (MIRA 12:9)

1. Laboratoriya tekhnologii i organizatsii proizvodstva TSentral'-nogo nauchno-issledovatel'skogo instituta shveychnoy promyshlennosti.
(Tailoring)

PANKOVA, L.N.; SHIRYAYEVA, Yu.D.

Assembling the rise of trousers on the SVB-4 machine.
Shvein.prom. no.1:23-25 Ja-P '60. (MIRA 13:6)

1. Tsentral'nyy nauchno-issledovatel'skiy institut shveychnoy
promyshlennosti, Moskva.
(Trousers)

BOBYLEVA, L.I.; PANKOVA, L.N.; SHIRYAYEVA, Yu.D. (Moskva)

Use of nonwoven fabrics in the manufacture of women's
dresses. Shvein. prom. no. 3:21-23 Je-Jl [i.e. My-Je] '61.
(MIRA 16:11)

SHIKHIN, Yu.E.

Efficient measures for improving the development of the Yarinskaya area of the Yarino-Kamennyy oil field. Nefteprom. delo no.7:3-5 '65.
(MIRA 18:8)

1. Neftepramy:levoye upravleniye "Polaznaneft".

BERNSHTEYN, S.A., prof. Prinimali uchastiye: KRAVCHENKO, P.Ye., dots.;
SHIRYAYEVA, Z.S.; KHRUSTALEVA, N.I., red.; GOROKHOVA, S.S.,
tekhn. red.

[Strength of materials] Soprotivlenie materialov. Moskva,
Gos. izd-vo "Vyschaia shkola," 1961. 463 p. (MIRA 15:4)
(Strength of materials)

Statco, G. W. - "On determining the composition of the pile in cascade key-board data," Trans Am Soc Chromatogr, Institute of Geophysical and Technical, Issue 1, 1958, p. 5-11.

SP: X-3051, 16 June 58, (Statco's Journal 'ng'h Statco, No. 5, 1958).

1941, p. 11.

Chizyayeva, L. M. - "Research on the dependence of unit efficiency on series of factors," Trudy Akademii Nauk SSSR po Tekhnicheskym Naukam, No. 6, 1941, p. 11-12.

See: U-2050, 16 June 52, (Letopis 'Zurnal 'nykh Statey, No. 5, 1949).

IVANOVA, M.N.; SHIRYAYEVSKIY, A.G.

Raw material constituents of textile goods in the United States
(from "Textile Organon," Jan, Apr., 1959). Tekst.prom. 20 no.4:
86-87 Ap '60. (MIRA 13:8)
(United States--Textile fabrics)

S/123/60/000/008/002/017
A004/A001

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1960, No. 8, p. 21,
37462

✓B

AUTHORS: Krasnichenko, L.V., Shirzhetskiy, M.N.

TITLE: Structure and Antifriction Properties of Heat-Treated Steel Pseudo-Alloys

PERIODICAL: Tr. Kafedry "Tekhnol. metallov". Rostovsk.-n/D, in-t s.-kn.
mashinostr. Rostov-na-Donu, 1958, pp. 102-105

TEXT: The authors investigated the effect of heat treatment on the anti-friction properties of metallized pseudo-alloys which are used as bearing materials.¹⁶ The preliminarily heat-treated specimens of steel pseudo-alloy were tested on a friction machine at sliding speeds of 1.33 m/sec over a hardened steel bushing with flood lubrication. The tests showed that, as a result of tempering, cementation and normalization, the antifriction properties of steel pseudo-alloys are increased, and that, according to their physical and mechanical properties, they can be used as antifriction bearing bushings. It was found that the friction

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S/123/60/000/008/002/017
A004/A001

Structure and Antifriction Properties of Heat-Treated Steel Pseudo-Alloys

coefficient for heat-treated specimens possesses its minimum magnitude at a specific load of 125 kg/cm^2 , and that it grows comparatively slow if the specific load is increased. Practically, the friction coefficient is the same for all specimens. All the specimens operated up to a maximum load of 594 kg/cm^2 , which could be obtained under test conditions, without galling. In all tests, the product of sliding speed by specific load reached approximately 800 kgm/sec.cm^2 . There are 3 figures.

Translator's note: This is the full translation of the original Russian abstract.

M.G.N. *VB*

Card 2/2

SHIRZHETSKIY, M. N. Cand Tech Sci -- "Formation, structure, and properties of steel metal-plating layers." Khar'kov, 1961 (Min of Higher and Secondary Specialized Education. Khar'kov Polytechnic Inst. Chair of "Metal Studies and Heat Treatment").(KL, 4-61, 202)

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-■■■-

SHISGAL, S.

Gypsum

Dry plastering with fibrous gypsum. Zhil. kom. khoz. 2 No. 1, 1952

Monthly List of Russian Accessions, Library of
Congress, July 1952. Unclassified

SHISGAL, S., nauchnyy sotrudnik.

Organization of fibrous gypsum plaster production. Zhil.-kom.khoz. 3 no.
8:29 Ag '53. (MLRA 6:8)

1. RNIIAKKh.

(Plaster)

SHISGAL, Yu., inzh.

Offices and personnel facilities for mines. Mast. ugl. 7 no. 7:24
J1 '58. (MIRA 11:8)
(Mine buildings)

DAVYDOV, N.N., inzh.; SHISGAL, Yu.M.

Tashkent large-panel housing construction combine. Mekh.stroi, 18
no.4:19-20 Ap '61. (MIRA 14:6)

1. Institut Giprostroyindustriya.
(Tashkent--Precast concrete)

SHISH, D.Z., gornyy inzh.; SHKREJKO, G.S., gornyy inzh.

Results of mining a block under complex mining and geological conditions. Gor. zhur. no.5:27-29 My '64.

(MIRA 17:6)

1. Shakhta "Yuzhnaya" tresta Leninruda, g. Krivoy Rog.

SHISH, V.N., gornyy inzh.; SHEFIR, N.M.

Pneumatic portable winch with a load capacity of 150 kg. Gor.zhur.
no.5:73 My '60. (MIRA 14:3)

1. Institut Giprorudmash, Krivoy Rog.
(Winches)

BUGAYENKO, S.N., gornyy inzh.; KOZYREV, N.T., gornyy inzh.; SHISH, V.N.,
gornyy inzh.

New unified UVG-4.0 and UVB-4.0 cars. Gor. zhur. no. 12:48
D '65. (MIRA 18:12)

1. Institut Giprorudmash, Krivoy Rog.

SHISHAGIN, B., zasluzhenny trener SSSR.

With new targets. Voen.znan. 33 no.9:21 S '57. (MIRA 10:10)
(Shooting contests)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530011-2

SHISHAGIN, B., zasluzhenny trener SSSR.

International shooting contests by mail. Voen.znan. 74 no.3:28 Mr '58.
(Shooting contests) (MIRA 11:4)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530011-2"

SHISHAGIN, B., zasluzhenny trener SSSR.

We should better prepare our marksmen for competition.

Voen. znan. 35 no.10:30-31 O '59. (MIRA 12:12)
(Target practice)

SHISHAKINA, A.I.; SHVARTSAN, Ye.M.; ABDYUSHEVA, S.Kh., red.; DAVLETOV, Kh.,
tekhn. red.

[Concise English-Russian dictionary for chemists] Kratkii anglo-
russkii slovar' dlja khimikov. Alma-Ata, Kazahskoe gos. uchebno-
pedagog. izd-vo, 1960. 97 p. (MIRA 14:11)

(English language—Dictionaries—Russian)
(Chemistry—Dictionaries)

ACC NR: AIP0025661

(A)

SOURCE COPY. UR/0413/00/000/013/0126/0+2

INVENTOR: Venediktov, V. A.; Vasil'yev, Yu. A.; Popov, N. I.; Markelov, Ye. V.; Veynblat, M. Kh.; D'yakov, A. P.; Shishakov, K. I.; Gusim, L. Ya.; Skvortsov, A. M.; Kiryayev, Yu. A.; Guzanov, G. N.; Gerasimovich, S. O.

ORG: None

TITLE: A fluid device for damping torsional vibrations. Class 47, No. 183539 [announced by the Turbine Motor Plant (Turbomotornyy zavod)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 126-127

TOPIC TAGS: vibration damping, hydraulic device, torsional vibration

ABSTRACT: This Author's Certificate introduces a fluid device for damping torsional vibrations. The unit consists of a housing with a hole for fluid delivery and a removable annular disc with a compensating cavity set inside the housing. The installation is designed for more reliable and simpler filling of the unit with fluid by providing the faces of the disc or the internal surface of the housing opposite the hole for fluid delivery with at least one annular groove connected to the compensating cavity by channels in the disc body.

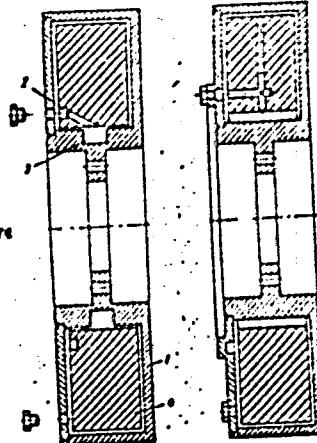
UDC: 621-752.2

Card 1/2

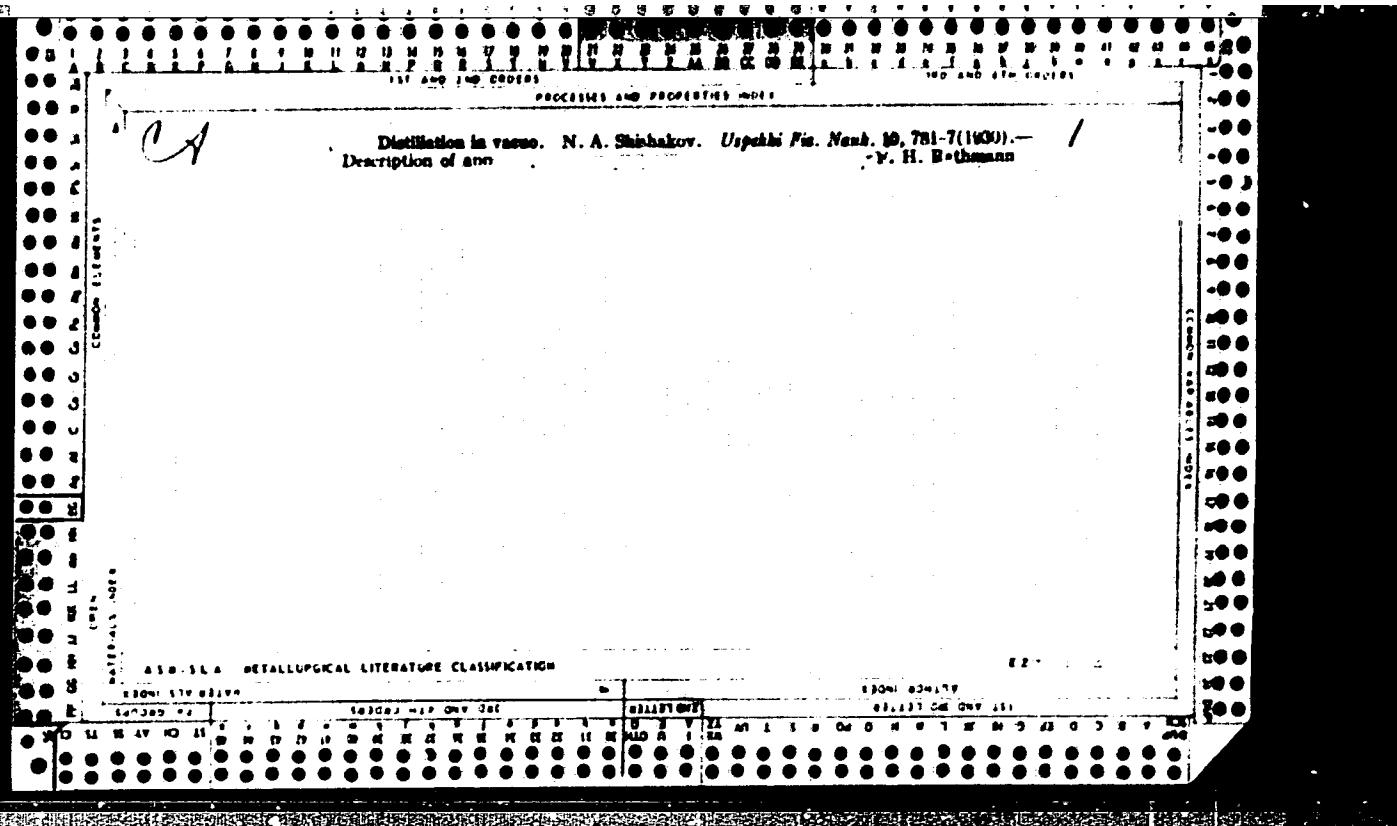
ACC NR. AP6025661

- 1--housing
2--annular groove
3--compensating cavity
4--disc

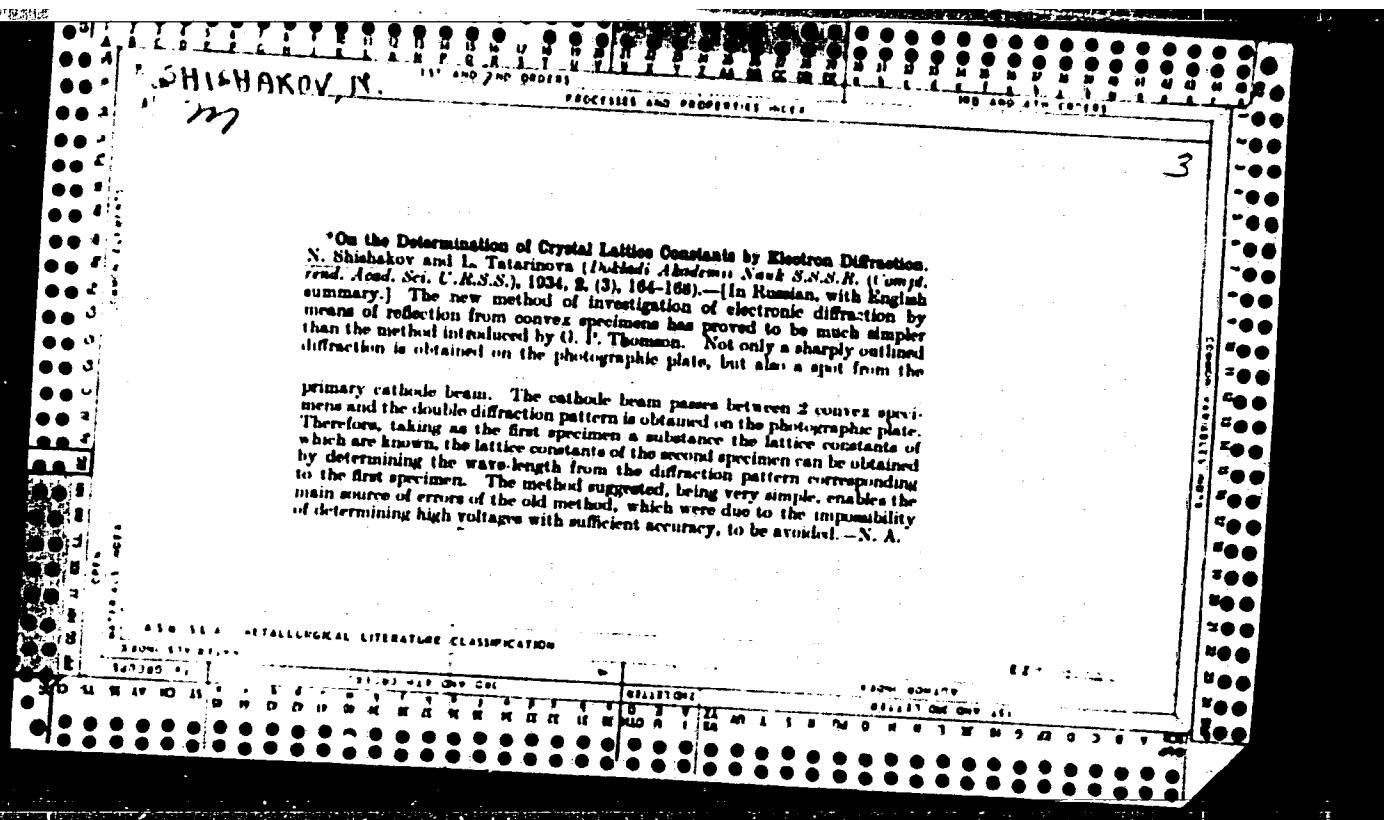
SUB CODE: 13.2c SUBM DATE: 28Apr65



Card 2/2



Electrometric titration and some properties of iron sulfate. N. A. SHISHKOV
Izv. Akad. Nauk SSSR, 1952, 25(1951). - As a practical method for titrating
FeSO₄ potentiometrically with K₂Cr₂O₇, a revolving electrode is recommended; the initial
high speed of revolution is gradually reduced as the reaction proceeds.
CHAS. BLANC



PROCESSED AND COMPUTERIZED

Structure of the surface of oxidized iron N-A
Shishakov. Compt. rend. acad. sci. U. R. S. S. 1, 456 (1956)
(in English 1957) (1958). A defence of the double-specimen
method of obtaining electron diagrams. G. M. V.

3

ASIN 11A METALLURGICAL LITERATURE CLASSIFICATION

CO
3

Powder method in electrography. N. A. Shchakov.
Compt. rend. acad. sci. U. R. S. S. 1, 401 (1918 English
453) (1915). The powder method is satisfactory if suf-
ficiently fine particles are employed. Air sedimentation
through about 1 m. is sufficiently accurate. Thin cellul-
loid films serve as collectors for the transmission method,
and convex metallic surfaces for the reflection method.
George M. Evans

100-110-00000 METALLURGICAL LITERATURE CLASSIFICATION

100-110-00000

100-110-00000

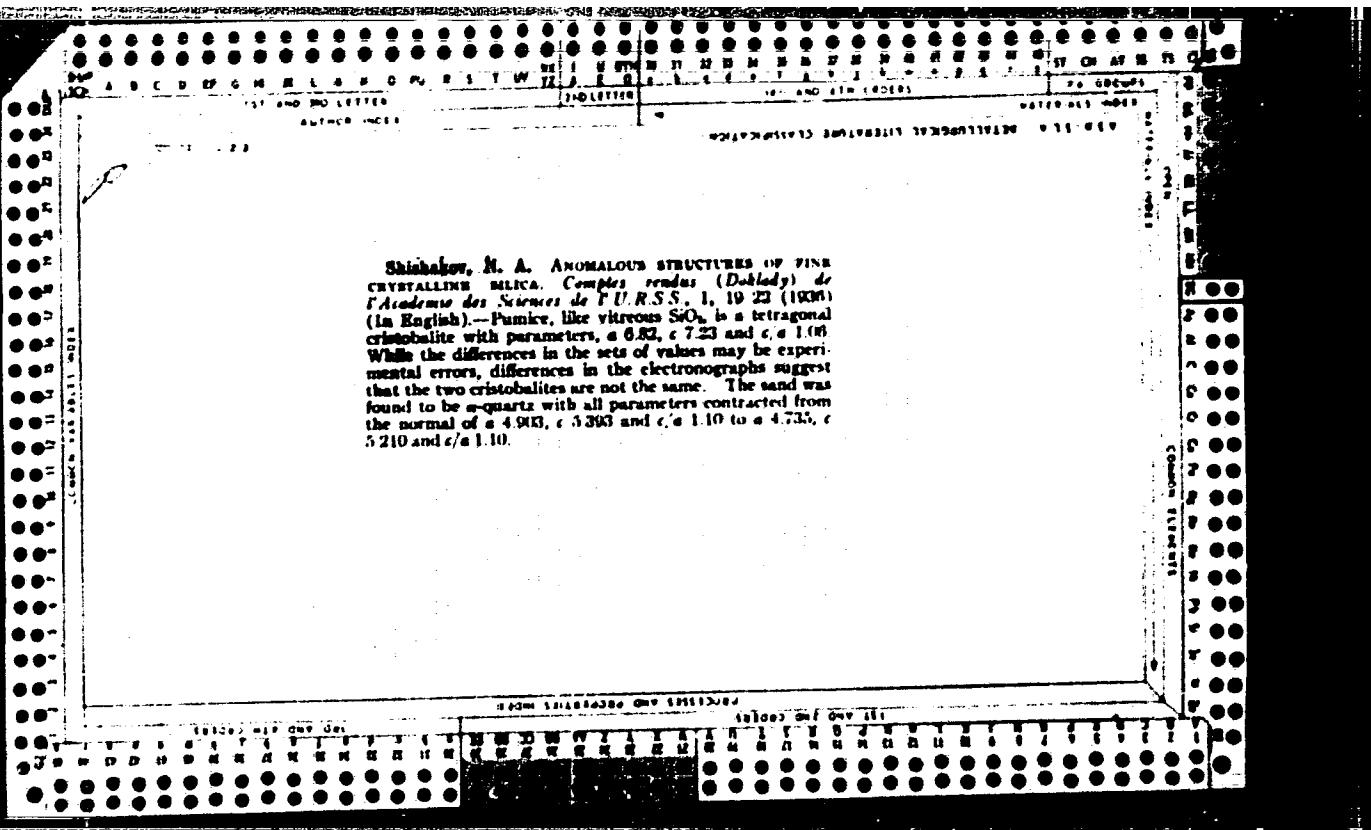
X
Diffraction of electrons by quartz glass. N. A.
Shishakay. *J. Tech. Phys.* (U. S. S. R.) 5, 1934-41
(1935). A drop of a suspension in water of finely powdered
quartz glass was set on a celluloid film from which the
structure of the quartz glass was studied by electronic
diffraction. The quartz glass was found not to be amor-
phous but to consist of crystals of tetragonal cristobalite,
apparently the size of colloidal particles. F. H. K.

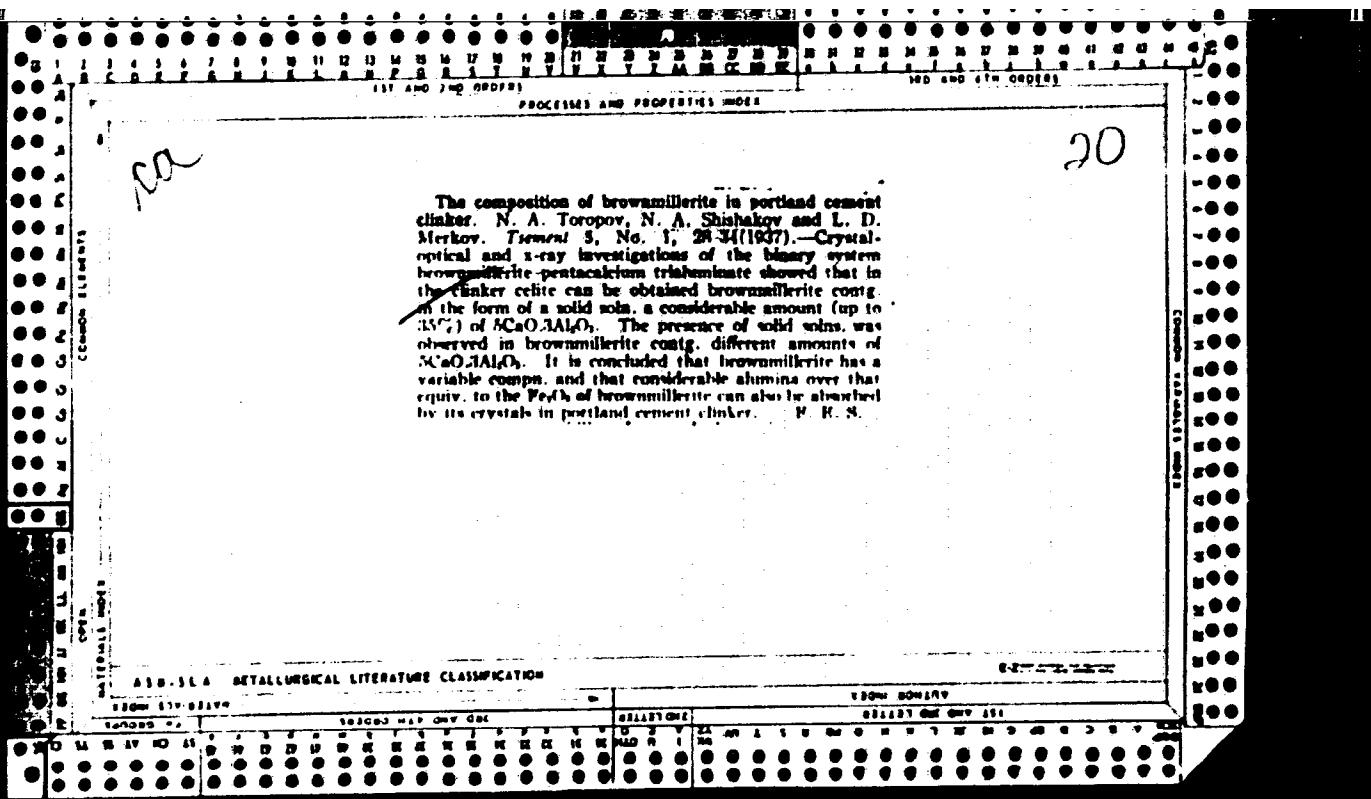
430-514 METALLURICAL LITERATURE CLASSIFICATION

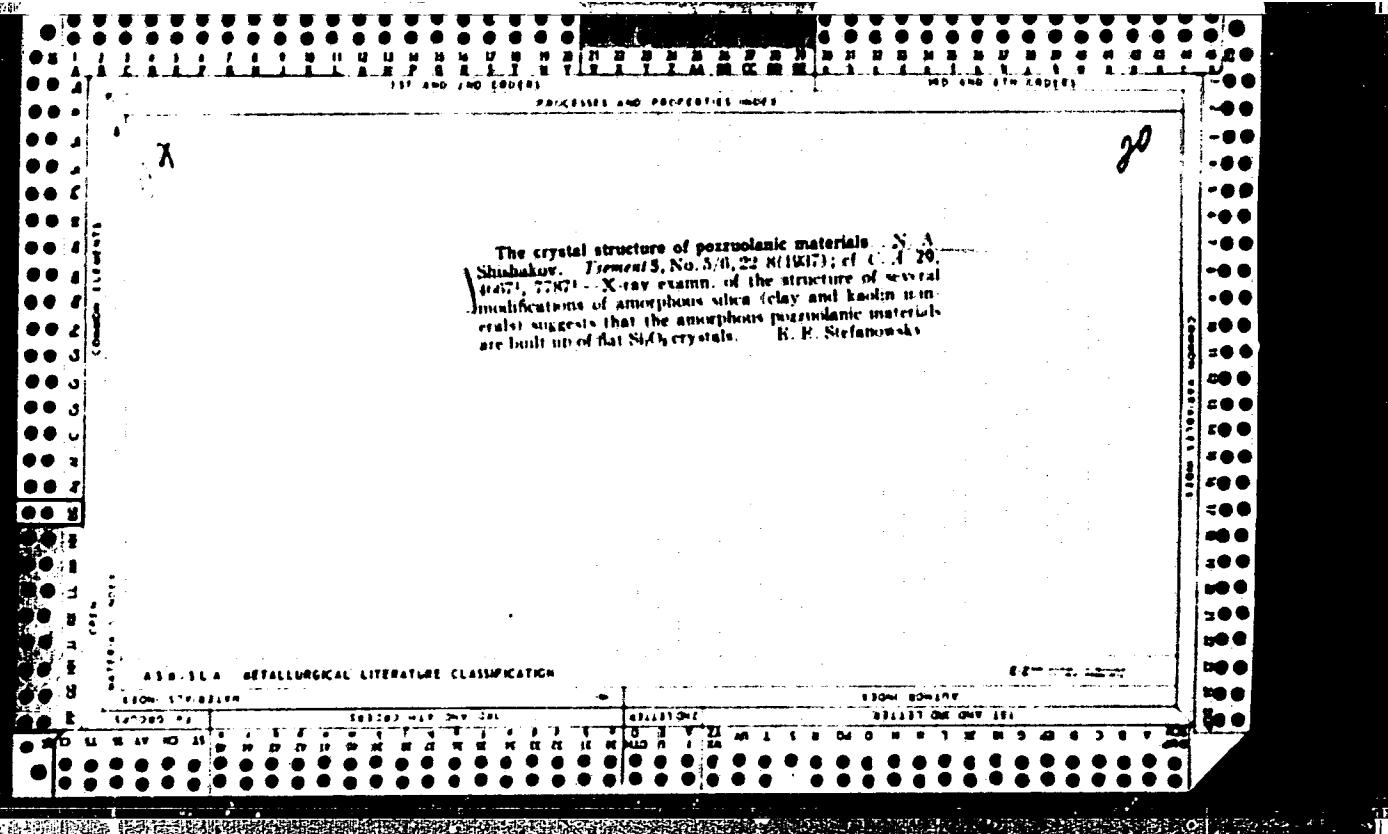
10

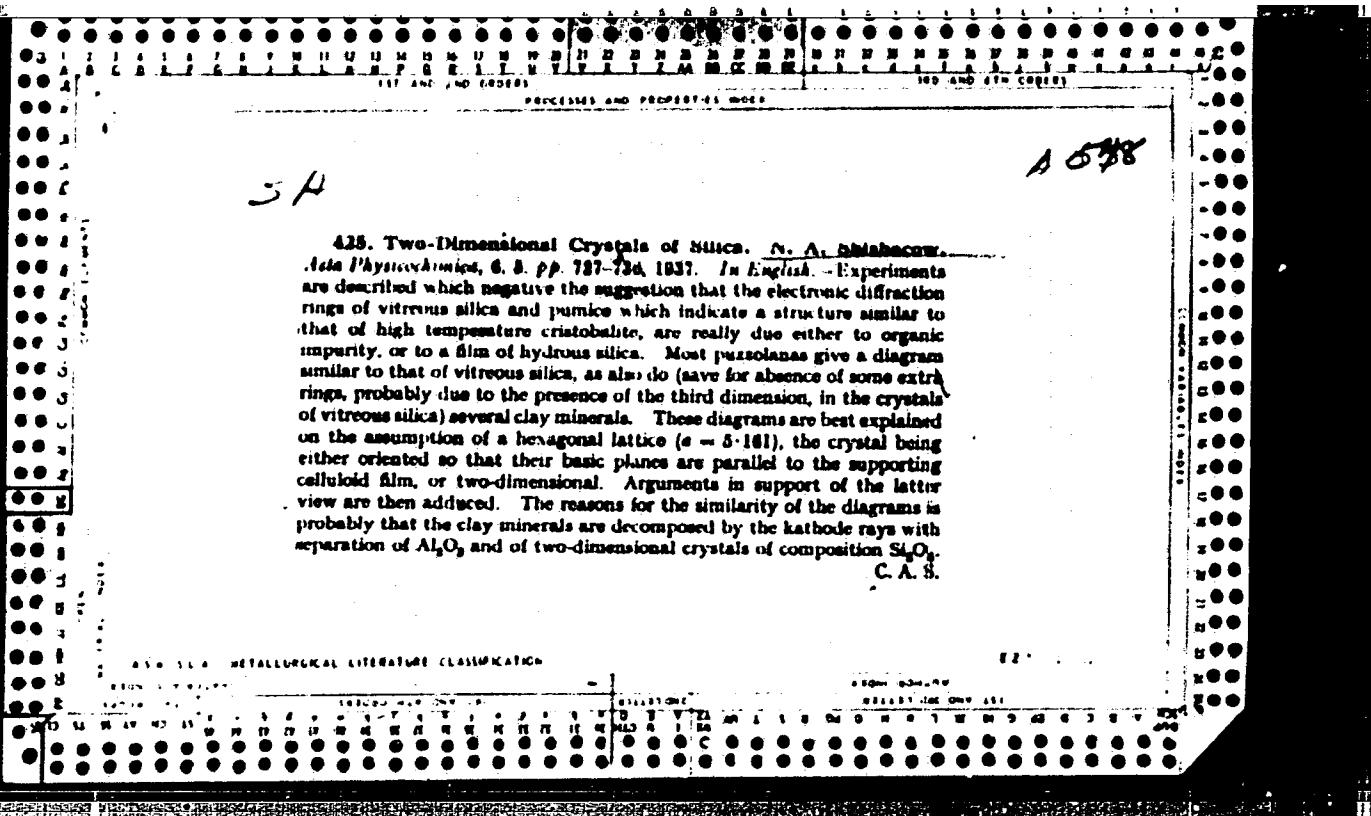
Electron diffraction by vitreous silica powder
Nishikubo, Nature, 186, 514 (1969), 11 figs. 4 pp.
1967. Methods of collecting dusts for electron diffraction
expts. are described. By using vitreous silica
powder (which does not give sharp rings when exposed to
X-rays), 11 rings were obtained with intervals in good
agreement with the Bragg spacings. The scattering is due
to tetragonal cristobalite crystallites. The axial ratio is
1.03; $a = 0.87$, $c = 7.29$. The size of the crystallite is
15-20 Å. The electron wave lengths are about 0.06 Å.
G. M. Petty

APPENDIX - DETAILLED LITERATURE CLASSIFICATION









co

3

Standard substances for accurate measurements in
electrography. N. A. Shashkov. *J. Appl. Phys.*
Phys. (U.S.S.R.) 7, 1166-7 (1937); cf. *C. A.* 32, 4201.
Thin gold foil gives errors up to 0.8%, due to irregularities
of the lattice. NaCl crystals obtained on celluloid
films by evapn. are irregular. Drops of fine suspensions
of kaolin or clay free of iron on celluloid films can be
dried to give crystals of S_6S_3 , which have a hexagonal
structure, $a = 5.161 \text{ \AA}$, $\alpha = 0.107^\circ$. Only the \bar{m} indices
(10), (11), (12), (20), (22) and (31) are of significance.
The monoclinic structure of the minerals is destroyed by
even a very short exposure and does not interfere.

F. H. Rathmann

CA

3

Standard substances for exact measurements with the
electron diffraction method. N. A. Shishakov. *Physik.
Sovjetunion* 12, 21 2 (1937) (in English); cf. C. A. Bl.
C. D. West

AM-1A METALLURGICAL LITERATURE CLASSIFICATION

co
2

INVESTIGATION OF STRUCTURES OF SILICA GLASS, PORCELAINAS AND CLAYS BY MEANS OF ELECTRON DIFFRACTION. N. A. Shishakov. *Comp. rend. acad. sci. U. R. S. S.* 15, 127-30 (1937) (in English).—Patterns of thin prominent rings were obtained. They are attributed to two-dimensional crystals with the following lattice coordinates: Si (0, 0), (2/3, 2/3); O(0, 0), (2/3, 2/3), (2/6, 5/6), (5/6, 2/6), (5/6, 5/6). Harold Cervinowitz

APPENDIX METALLURGICAL LITERATURE CLASSIFICATION

SHISHAKOV N.A.

A 53

4693. Standard Substances for Exact Measurements by Electron Diffraction. N. A. Shishakov. *Comptes Rendus (Doklady) de l'Acad. des Sciences, U.S.S.R.* 18, 8, pp. 461-465, 1957. In English.—Different methods for employing standard specimens to eliminate the uncertainty with regard to wave-length in electron diffraction are reviewed and the requirements to be fulfilled by a suitable reference material are discussed. The lattice parameters of Au, Ag and Ni are not constant in thin films, whilst a great variation in crystal size is observed in the case of NaCl. It is claimed that these difficulties may be overcome by using as reference substance the "two-dimensional crystals" of Si_2O_5 discovered by the author. Such specimens are easily prepared and the lattice parameters have been shown to be constant to within 0.2%, corresponding to a hexagonal network with $a = 5.161 \text{ \AA}$. A. G. Q.

AMERICAN INTELLIGENCE LITERATURE CLASSIFICATION

9

Oxide films on metals. L. P. D. Dankov and N. A. Shishakov. *Bull. acad. sci. U. R. S. S., Chisl. mat. i fiz.*, No. 6, 1938, 1225-48 (in English, 1948). The nature of oxide films of Fe was investigated by means of electron diffraction; a metal electromicrograph with a hot cathode and 3 diaphragms is used. Fe films were obtained by condensing Armen Fe in vacuum. The films were then oxidized at various temps. at 500-600° only α -Fe₂O₃ was observed on the surface; at 250-350° the forms α -Fe₂O₃ and Fe₃O₄ (or γ -Fe₂O₃) were observed, and at lower temp. the oxide film corresponded to α -Fe₂O₃. At room temp. the oxide film has a cryst. structure. It is shown that when O penetrates into the metal lattice there is only a min. change in the form and parameters of the initial crystal lattice. As a result of this, the cryst. structure of the oxide which forms on the metal surface is similar to the metal. Fifty-eight references. B. Z. Kamich

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

SIGN STAMP

SERIAL NO. ON CARD

ILLUSTRATION

SIGN STAMP

SERIAL NO. ON CARD

SHISHAKOV, N.

Mosaic blocks of silicate glasses. N. Shishakov. *Zh. Tekh. Fiz.* U. S. S. R. 5, 600-75 (in English); *J. Tech. Phys. (U. S. S. R.)* 5, 1347-65 (1978).—The author endeavors to show that silicate glasses have a mosaic structure and that the presence of empty spaces between the mosaic blocks is responsible for such properties as low mech. strength, brittleness, sorption properties, etc. Approx. calcs. show that the linear dimensions of the elementary monocr. blocks in glasses are about 700 Å, and the thickness of the empty spaces between them is about 12 Å. C. B. Jean

450-11A METALLURGICAL LITERATURE CLASSIFICATION

CP

9

Orientation of crystals on the surface of brass during polishing. N. A. Shishakov and V. I. Kamtochkin. Izv. Akad. Nauk SSSR, Ser. Fiz., No. 1, 1958, p. 1215-17 (1959); Chem. Zvezd. 1959, II, 4430.—In the polishing of brass with emery an orientation of the crystals of emery on the surface of the brass was observed, the (1 1 0) axis of the crystal lying in the direction of polishing. M. G. M.

AB-1A METALLURGICAL LITERATURE CLASSIFICATION										REFERENCE NUMBER										
SEARCHED					SEARCHED AND INDEXED					SEARCHED					SEARCHED AND INDEXED					
SERIAL NO.	SEARCHED	SEARCHED AND INDEXED	SEARCHED	SEARCHED AND INDEXED	SERIAL NO.	SEARCHED	SEARCHED AND INDEXED	SEARCHED	SEARCHED AND INDEXED	SERIAL NO.	SEARCHED	SEARCHED AND INDEXED	SEARCHED	SEARCHED AND INDEXED	SERIAL NO.	SEARCHED	SEARCHED AND INDEXED	SEARCHED	SEARCHED AND INDEXED	
1	W	A	V	H	2	W	D	D	P	K	X	X	X	X	3	W	A	I	E	N

227
"Orientation of Surface Crystals of Brass by Abrasion." N. A. Shishakov and V. I. Kasatochkin (*Dokl. Akad. Nauk S.S.R.* (Compt. rend.) *Akad. Nauk R.S.S.R.*, 1938, 58, (4), 277-278 (in Russian); and *Compt. rend. (Individ.) Acad. Sci. U.R.S.S.*, 1938, [N.S.] 20, (4), 277 (in English)).—Brass which has been ground in one direction only gives an electron-diffraction diagram which indicates almost complete orientation of a number of the crystals. When the photograph is taken with the incident beam perpendicular to the direction of the scratches, the axis along which crystals are oriented is in the [110] direction. No such effect is observed in the unidirectional abrasion of clean copper, iron, or steel.—N. A.

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

CR
PROCESSES AND PROPERTIES 10000

2

Binary system sodium ferrite-sodium aluminate. N. A. Toropov and N. A. Shchukina. *Acta Physicochim. U. R. S. S.* 11, 277-80 (1935) (in English).—Microscopic data of the x and Debye x-ray photographs show that the system $\text{Na}_2\text{O}\cdot\text{Al}_2\text{O}_5\text{-Na}_2\text{O}\cdot\text{Fe}_2\text{O}_3$ forms a continuous series of solid solutions. The two components have very similar properties, and both are thermally stable at 1300°. Data obtained for $\text{Na}_2\text{O}\cdot\text{Al}_2\text{O}_5$ agree with those of Brownmiller and Boggs (*C. A.* 26, 4233) but those for $\text{Na}_2\text{O}\cdot\text{Fe}_2\text{O}_3$ do not agree with those of Goldschmidt (*C. A.* 37, 2860).
P. H. Rathmann

Cement Inst., Leningrad.

A.I.D.-I.A. METALLURGICAL LITERATURE CLASSIFICATION

EDITION	EDITION	EDITION
TOPIC	TOPIC	TOPIC

Glass

A.C.S.

Crystals of quartz glass. N. A. SHIBRAKOV. *Compt. Rend. Acad. Sci. U.R.S.S.*, 23, 789-91 (1939) (in English); *Chem. Abstr.*, 34, 2000 (1940).—Zachariasen (*Comm. Akad. Nauk SSSR*, 13 [4] 148 (1938)) and others, on the basis of X-ray diagrams, concluded that quartz glasses, SiO_2 , or many-component glasses, are amorphous. S., using the electron-micrographical method, believes quartz glasses to be crystal. The X-ray and the electronmicrographical methods are discussed critically. The developed theory of two-dimensional or "scaly" crystals, consisting of sheets of SiO_4 , with a periodicity of 7 to 8 Å, is in agreement with Hartke's value of 8.33 Å.

CA
The mosaic blocks of crystalline quartz. N. A. Shashouy. Compt. rend. acad. sci. U. R. S. S. 23, 702-3 (1906) (in English).—The paper deals with expts. and calcns. of the d. and the peptization effects of quartz powder in water. Cryst. quartz has a d. of 2.649. The lattice parameters are $a = 4.28 \text{ \AA}$, $c = 5.28 \text{ \AA}$; the crystal cell vol. is; $\tau = (\sqrt{3}/2)a^2c$. The formula wt. being $M = 60.08$, the no. of mols. in the unit cell $N = 3$ and the mass of the hydrogen atom $m_H = 1.003 \times 10^{-24} \text{ g.}$ calcns. the d. f according to the formula: $f = 2NMm_H/\sqrt{3}a^2c$ and obtains a value $f = 2.088$, i. e., 1.5% higher than the measured d. The cavities or pores in the quartz responsible for this effect seem to be regularly distributed cracks and lead to the conclusion of a "mosaic structure" for quartz. From sedimentation expts., the thickness of the cracks d is calc'd. (The mean value λ for a particle is $\approx 1300 \text{ \AA}$.) $d = (v/3V)\lambda = 6.5 \text{ \AA}$, where v/V is the pore vol. equal to 1.5%. Several properties of quartz, such as the ability to rotate many regularly distributed inclusions (e. g., amethyst) and the penetration of cations through the mineral in an elec. field, help to establish the suggested theory.

Frederic C. Nachod

ASB-3LA - METALLURGICAL LITERATURE CLASSIFICATION

SEARCHED	SEARCHED WITH ONLY ONE	SERIALIZED	FROM SOCIETY											
			0	1	2	3	4	5	6	7	8	9	0	1
SEARCHED	SEARCHED	SERIALIZED	0	1	2	3	4	5	6	7	8	9	0	1
SEARCHED	SEARCHED	SERIALIZED	0	1	2	3	4	5	6	7	8	9	0	1
SEARCHED	SEARCHED	SERIALIZED	0	1	2	3	4	5	6	7	8	9	0	1

2
2000-10001 AND PREPARATION MODE

Cl
Surface structure of passive iron. P. D. Danilov and N. A. Shishakov. *Comput. rend. acad. sci. U. R. S. S.* 24, 583-586 (1959) (in English); cf. *C. A.* 53, 6314^a.—Electronograms of passive Fe films (prepd. by condensing Fe vapor on mica or glass in vacuo, exposing to air, then submerging immediately in conc. eq. K_2CrO_4 , 0.06 N eq. K_2CrO_4 or strong HNO_3 , washing the sepd. film with H_2O and drying) indicate (1) the presence of a thin layer of extremely small crystals of cubic Fe_2O_3 (γ - Fe_2O_3) having the oxide lattice const., a , equal to $0.30 - 0.35$ Å, and (2) that the Fe lattice is approx. 1.6% greater than that of α -iron (shown by comparison of Fe lines with known lines). The above data do not agree with the work of Pinch (*C. A.* 33, 4100^b) unless a possible amorphous oxide component is assumed to be present in the film. George Ayers

6-67-07-12-2

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION		6-67-07-12-2	
ITEM NUMBER	182000 MAY 04 1961	COLLECTION	EDITION MAY 04 1961
140000 74			

ca

2

Electrogravitic investigation of thin films of copper. N. A. Slobodkin. *J. Exptl. Theoret. Phys.* (U. S. S. R.) 17, 140-144 (1949).—From electromograms of Cu films deposited on glass, the Cu lattice const. in 3.673 Å. or 1.8% greater than the x-ray lattice const. Similar results are found for other metals. P. H. Rathmann

SHISHAKOV, N. A.

"A Contribution to the Problem of the Structure of Golden and Silver Amalgams," Iz. Ak.
Nauk SSSR, Otdel. Khim. Nauk, No. 6, 1941. Acad. Sci. USSR, Colloid-Electrochemical
Inst., -1941-

SHISHAKOV, N. A.

"A Contribution to the Problem of the Structure of Silicate Glasses," Iz. Ak. Nauk SSSR,
Otdel. Khim. Nauk, No. 6, 1941. Acad. Sci. USSR, Colloid-Electrochemical Inst., -1941-.

CA

Electron-diffraction and x-ray investigation of the products formed in the corrosion of iron. N. A. Shishakov and P. S. Moseev. *J. Phys. Chem. (U.S.S.R.)* 15, no. 8 (1941). When pure metallic iron slowly oxidizes in the presence of water, the first product is crystalline γ -FeOOH with the lattice const., $a = 2.180$, $b = 1.935$, $c = 1.530$ Å. On aging, γ -FeOOH is converted to the amorphous oxide FeOH. Lattice const., $a = 8.31$ Å. Empirical data on the electron-diffraction and x-ray patterns are shown in the tables.

B. H. Rathmann

ASR-5A - METALLURGICAL LITERATURE CLASSIFICATION

SHISHMAKOV, N. A.

"Oxide Films on Metals II. Initial Oxide Films on Aluminium." Iz. Ak. Nauk SSSR, Otdel.
Khim. Nauk, No. 5, 1942. Colloid-Electrochemical Institute. -1942-. Acad. of Sci.

ca

9

The texture of the $\gamma\text{-Fe}_2\text{O}_3\text{H}_2\text{O}$ crystals which are formed during corrosion of iron. N. A. Shehakony.
Zhur. Fiz. Khim. (*J. Phys. Chem.*) 22, 969-8(1948).
A drop of water was placed on a celluloid film, an Fe wire was immersed in the drop for several hrs., and the drop allowed to evap. An invisible film of rust remained on the celluloid. Electron-diffraction study of it showed that the flakes of $\gamma\text{-Fe}_2\text{O}_3\text{H}_2\text{O}$ were parallel to the support.
I. J. Bikerman

ALGOL 60 METALLURGICAL LITERATURE CLASSIFICATION

ca

9

Electrographic study of the size of iron crystals and of the thickness of the oxide film formed on them. P. D. Dankov and N. A. Shishakov. *Zhur. Fiz. Khim.* (J. Phys. Chem.) 22, 986-90 (1948).—Fe was evapd. in a vacuum onto a celluloid film (cf. C.A. 33, 6214*) the electron-diffraction pattern of the deposit was detd., air was allowed to oxidize Fe throughout, and the patterns of the oxide was obtained. The dimensions of the crystals were calcd. by using Brill's equations (C.A. 28, 3977*). Fe crystals were 13 Å., and γ - Fe_2O_3 crystals were 17-18 Å. long. It is probable also that Fe_2O_3 films on Fe are about 17 Å. (2 unit cells) thick. The results of Winkler and Hahn (C.A. 22, 8870*) when corrected for a numerical error, are in agreement with this. J. J. Bikerman

AMSLA METALLURGICAL LITERATURE CLASSIFICATION

CLASSIFICATION

SERIES

THERM. & PHYS.

STRUCTURE

PROPS.

TESTS

INDUS.

TECHN.

SHISHAKOV, N. A.

25564 O mekhanizme plavleniya kremnezema i o genezice silikatnogo stekla.
Zhurnal fiz. khimii, 1949, Vyp. 8, 5.889-96. Bibliogr: 7 nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 34, Moskva, 1949

SHISHAKOV, N. A.

SSR/Physics
I-Ray Diffractions
Crystals

May 49

"Displacement of Interference Maxima During Changes in Size and Form of Very Small Crystals," N. A. Shishakov, Inst. Physicochem. Acad. Sci. USSR, 7 pp

"Zhur. Fiz. i Teoret. Fiz." Vol. XIX, No. 5

Calculations with the aid of Debye's equation show that dispersion by crystals of infinitely small size is peculiarly anomalous. Maxima for three-dimensional crystals are found with Bragg angles but have anomalous relative intensities. Two- and one-

46/49T98

SSR/Physics (Contd)

May 49

dimensional crystals also exhibit displacement of maxima with respect to Bragg's positions. Explains this phenomena and introduces several examples applying law of displacement. Submitted 19 Nov 48.

46/49T98

1460
COLLECTED AND PREPARED BY
Crystal-Chemical Mechanism of an Oxide Film on Iron at Room
Temperature (original text in Russian). P. D. Danikov and N.
A. Sushakov; J. Phys. Chem. (USSR) Sep '49 (33-9 Mthly); pp
1031-1039; 7 Illus.

It can now be explained that the cause for chemical passiv-
ity of iron is due to the fact that its surface is covered with
a protective oxide film of crystalline nature. It was shown
that, in the case of very small ferro-crystals (12-15 Å), oxygen
completely transforms these crystals into oxide with crystal
dimensions of 16-30 Å. The next problem was to investigate
the separate stages of the formation of oxide. This was
expected to throw light on the mechanism of the oxidizing proc-
ess. The electrographic investigations, as before, were con-
ducted mainly on ferric films, created by the condensation of
its vapor in vacuum in the electrograph itself. The innovations
in these problems were the determination of the oxygen effects
of aqueous vapor and nature of the substratum. It was con-

APPENDIX METALLURGICAL LITERATURE CLASSIFICATION

cluded that condensed iron produces, also at very careful condensations, electrograms with comparatively wide lines. In some cases the electrograms disclose magnetite oxide instead of iron, even when oxygen is induced into the instrument. Because in most cases the vacuum in the electrograph was completely satisfactory (approx. $3 \cdot 10^{-4}$ mm mercury column) and the life of the iron deposit was sometimes measured to within a fraction of a minute, the formation of oxide was found to be caused by the effect of gases adsorbed by the surface of the substratum. The accuracy of this statement was verified by the case in which iron was condensed over a celluloid film preheated up to 60°-80°C. In such cases the graphs are composed of unusually thin lines. Iron condensed over a highly precooled celluloid film produces a graph showing an unknown hydroxide instead of metallic iron.

15-2-117

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530011-2

CA

Electrometry as a method for the physical chemistry of
surface films. N. A. Shishkov (Inst. Phys. Chem., Moscow).
Zhur. Fiz. Khim. 24, 1090 9(1950). An annotated
bibliography. Paul W. Illeseth

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549530011-2"

SHISHAKOV, N. A.

USSR/Chemistry - Electrolytic Deposition Aug 51

"Structure of Bright Electrolytic Deposits and Mechanism of Their Formation. Electron-Microscopic and Electronographic Investigation of Bright Nickel and Zinc Coatings," K. M. Gorbunova, T. V. Ivanovskaya, N. A. Shishakov, Inst Phys Chem, Moscow, Acad Sci USSR

"Zhur Fiz Khim" Vol XXV, No 8, pp 981-987

PA 190T21

SHISHAKOV, N. A.

In memory of P. D. Dankov, D. V. Ignatov and N. A.
Shishakov. *Uspenii Khim.* 21, 363-5 (1952).—Obituary
with portrait (1902-1952) of D., a specialist in chemistry of
metals.

G. M. Kosolapoff

S. H. Shishakov N. A.

Anomalous lattice constants of very small crystals of certain metals. N. A. Shishakov. *Zhur. Ekspd. i Teor. Fiz.*, 22, 241-6 (1952). An exciting investigation of thin Al films by electron diffraction reveals no deviations from the normal lattice const. ($a = 4.04 \text{ \AA}$) with standards such as NaCl and paraffin. Finch and Quarrel (C.A. 27, 4978) have stated that Al sublimed on Pt has a tetragonal lattice ($a = 3.90 \text{ \AA}$, $c = 4.02 \text{ \AA}$) while the lattice const. of Pt remain normal. However, careful analysis of the original pattern reveals a combination of 2 face-centered cubic lattices with consts. 3.91 and 3.86 \AA . The smaller lattice (by 2%) is considered to be that of Pt. On assumption that the Al lattice is normal ($a = 4.04 \text{ \AA}$), the other parameter indicates a slightly lower accelerating voltage than 45 kv., not unlikely, since F. and Q. did not specify the degree of precision. Consequently, the Pt lattice const. was 1.5% above normal. An exptl. analysis was made by sputtering Pt on Al foil in air at $10^{-1} \text{ mm. of Hg}$ with 3000 v. After dissolving all but a trace of Al in alk. soln., a pattern of rings was obtained from the Pt and a Lane pattern from the Al (coarse grains). For the Pt, $a \approx 3.97 \pm 1\%$, close to the value derived from the data of Finch and Quarrel. Based on a normal lattice for thin Al films, the degree of expansion of the lattice of metals in the form of thin films (compiled from 4 sources) is: Fe 2.5%; Cu 1.8%; Ni 1.2%; Ag 1.0%; Au 0.8%; γ -Cr 1.0%; Pt 1.5%; Al 0.9%. Dissolved gases may be responsible for lattice widening, but, more probably, the effects are typical of pure metals.

R. D. Mich

62

Inat. Phys. Chem., AS USSR

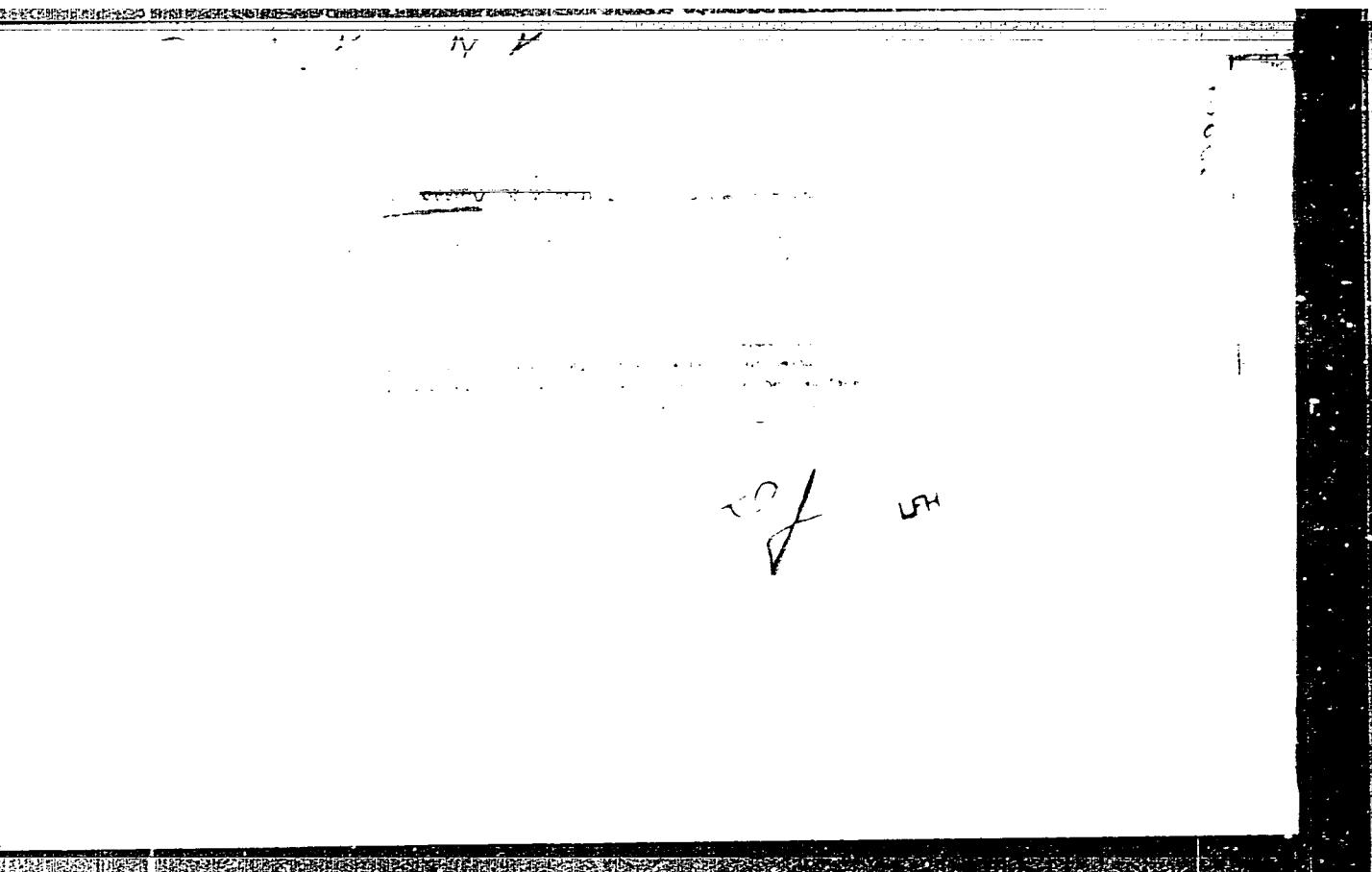
SHISHAKOV, N.A.

Electronographic study of hydroxide films on metals (magnesium, aluminum, iron, and copper). Zhur. Fiz. Khim. 26, 106-11 '52. (MLRA 5:6)
(CA 47 no.13:6207 '53)

1. Institut fizicheskoy khimii, Akademiya nauk S.S.R., Moscow.

"APPROVED FOR RELEASE: 08/23/2000

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CIA-RDP86-00513R001549530011-2"

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